

Sub 17
B13
1. (Twice Amended) A sputtering target of high purity Nb, comprising an amount of Ta, wherein the Ta content is 3000 ppm or less, wherein a dispersion of the Ta content in the target is within 30%, the dispersion of the Ta content being defined by the following equation, for measured content values in the target:

$$\text{dispersion (\%)} = \{(\text{maximum value} - \text{minimum value}) / (\text{maximum value} + \text{minimum value})\} \times 100.$$

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6. (Amended) The sputtering target as set forth in claim 1:
wherein each grain of [the] Nb has a grain diameter in the range of 0.1 to 10 times an average grain diameter, and a grain size ratio of adjacent grains is in the range of 0.1 to 10.

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9. (Amended) The sputtering target as set forth in claim 1:
wherein the sputtering target is applied to form a Nb film for a liner of an Al interconnection film or an Al alloy interconnection film.

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10. (Amended) A sputtering target of high purity Nb:
wherein each grain constituting the Nb target has a grain diameter in the range of 0.1 to 10 times an average grain diameter, and a grain size ratio of adjacent grains is in the range of 0.1 to 10.

11. (Twice Amended) The sputtering target as set forth in claim 10:
wherein a dispersion of the grain size ratio of adjacent grains in the target is within 30%,
wherein the dispersion of the grain size ratio of the adjacent grains is defined by the following equation, for measured values in the target:

$$\text{dispersion (\%)} = \{(\text{maximum value} - \text{minimum value}) / (\text{maximum value} + \text{minimum value})\} \times 100.$$

12. (Amended) The sputtering target as set forth in claim 10:
wherein the grain size ratio of the adjacent grains is in the range of 0.5 to 5.

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17. (Amended) The sputtering target as set forth in claim 11:

wherein the sputtering target is used to form a Nb film for a liner of an Al interconnection film or an Al alloy interconnection film.

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B16 18. (Twice Amended) A sputtering target of high purity Nb comprising an amount of oxygen, wherein the oxygen content is 200 ppm or less, wherein a dispersion of the oxygen content in the target is within 80%, the dispersion of the oxygen content being defined by the following equation, for measured values in the target:

$$\text{dispersion (\%)} = \left\{ \frac{(\text{maximum value} - \text{minimum value})}{(\text{maximum value} + \text{minimum value})} \right\} \times 100.$$

B17 23. (Amended) The sputtering target as set forth in claim 18:
wherein the sputtering target is used to form a Nb film for a liner of an Al interconnection film or an Al alloy interconnection film.

Marked-up versions of the corresponding paragraphs in the specification and of the amended claims are attached to this Response.